We claim:

1. A crystalline valdecoxib form I, characterized by an x-ray powder diffraction pattern having peaks expressed as 2θ at about 9.7, 13.1, 14.0, 14.5, 17.0, 17.1, 17.7, 19.4, 20.9, 21.3, 21.8, 24.1, 25.4, 26.3 and 29.1 degrees.
2. A crystalline valdecoxib form I as defined in claim 1, further characterized by an x-ray powder diffraction pattern as in figure 1.
3. A process for preparation of valdecoxib form I as defined in claim 1, which comprises the steps of: a) dissolving valdecoxib in dimethyl formamide or N,N-dimethyl acetamide; and b) isolating valdecoxib form I from the solution.
4. A process according to claim 3, wherein valdecoxib is dissolved in dimethyl formamide.
5. A process according to claim 3, wherein the solution formed in (a) is cooled to 25^0C to 30^0C and the separated crystals are collected by filtration or centrifugation.
6. A crystalline valdecoxib form II, characterized by an x-ray powder diffraction pattern having peaks expressed as 2θ at about 12.2, 15.4, 15.9, 19.9, 20.6, 22.0, 23.0, 23.6, 23.9, 24.5, 25.1, 28.6 and 31.3 degrees.
7. A crystalline valdecoxib form II as defined in claim 6, further characterized by an x-ray powder diffraction pattern as in figure 2.
8. A process for preparation of valdecoxib form II as defined in claim 6, which comprises:

a) dissolving valdecoxib in acetonitrile; and
b) isolating valdecoxib form II from the solution formed in (a).

9. A process according claim 8, wherein valdecoxib form II is isolated from the solution at about 25^0C to 30^0C.
10. A crystalline valdecoxib form III, characterized by an x-ray powder diffraction pattern having peaks expressed as 2θ at about 11.6, 12.2, 12.9, 13.3, 15.4, 15.7, 16.7, 17.0, 17.4, 18.1, 19.7, 20.6, 21.9, 22.4, 23.1, 23.4, 23.8, 24.4, 25.3, 25.7, 26.1, 28.5 and 29.7 degrees.
11. A crystalline valdecoxib form III as defined in claim 10, further characterized by an x-ray powder diffraction pattern as in figure 3.
12. A process for preparation of valdecoxib form III as defined in claim 10, which comprises:

a) dissolving valdecoxib in an ester solvent; and

b) isolating valdecoxib form III from the solution formed in (a).

wherein the ester solvent is selected from n-butyl acetate, ethyl acetate, methyl acetate, isopropyl acetate, tert-butyl acetate, ethyl formate and methyl formate.

13. A process according to claim 12, wherein the ester solvent is n-butyl acetate.

14. A process according to claim 13, wherein valdecoxib form III is isolated at 25^0C to 30^0C.

15. A pharmaceutical composition comprising valdecoxib form I of claim 1 and a pharmaceutically acceptable carrier or diluent.

16. A pharmaceutical composition comprising valdecoxib form II of claim 6 and a pharmaceutically acceptable carrier or diluent.

17. A pharmaceutical composition comprising valdecoxib form III of claim 10 and a pharmaceutically acceptable carrier or diluent.